NOXIOUS WEEDS

Characterization

About 330 non-native plants are known or suspected to occur in the Coos Bay District. These include 88 noxious weed species. The non-native and noxious weeds are listed in the Species and Habitats: Noxious Weeds Appendix. Known sites with noxious weeds occur primarily in disturbed areas, such as along roads and in recently logged areas scattered through the South Fork Coos Watershed. Based on casual observation, noxious weeds are also present on the agricultural lands in the Watershed. The noxious weed species in the Watershed include gorse (*Ulex europaeus)*, scotch broom (*Cytisus scoparius*), French broom (*Cytisus monospessulanus*), Klamath weed (*Hypericum perforatum*), tansy ragwort (*Senecio jacobaea*), bull thistle (*Circium vulgare*), St. Johns's wort(*Hypericum perforatum*), and Canadian thistle (*Circium arvense*). Broom is prevalent in the western portion of the Watershed. To the east, the large private holdings are relatively broom-free, probably due to an aggressive control program, and to a system of gates and permits limiting access.

Current Conditions

Noxious weeds are not present in large quantities in the South Fork Coos Watershed. The noxious weeds encountered in the Watershed are herbs or shrub species that would be shaded out by a closed canopy stand of trees and therefore are generally not a threat in mid to late seral forests. Gorse, Scotch broom, and French broom are known to cause habitat degradation in the Coast Range. If left uncontrolled, gorse and the broom species can invade early seral sites, like tree plantations, and form closed canopy brush fields that can exclude all other vegetation including trees.

Gorse seedlings were found on locations along a cat trail in section 24, T.27S.,R.9W. That cat trail is regularly monitored and gorse seedlings pulled or otherwise killed when found. The Scotch broom is present in only a few isolated locations in the forested areas of the Watershed and have not reached the epidemic proportions here that it has in the northern portion of the resource area. An FY 1994 inventory found 32 sites with broom on BLM. Most sites are either along road right-of-ways or on old landings. Broom most likely came into the Watershed on heavy equipment or in contaminated gravel although other methods cannot be discounted. The distribution pattern of broom along roads suggests it was spread by traffic and routine road maintenance. Private land was not inventoried however there are at least 12 sites on private land visible from BLM land or from roads accessing BLM. Casual observation indicates the brooms are more common in the populated areas of the Watershed. Maps NOX-1a,b,c&d show the known broom locations. The populations of broom species in this Watershed are small enough that they can be controlled, and in some locations eradicated. The Scotch broom seed weevil (*Apion fuscirostre*), which only attacks scotch broom, is present and effectively reduces seed production but does not affect survival of established broom plants. Broom seeds are long lived and sprout in response to sunlight, fire, or site disturbance.

No fully effective biological control agents for gorse are available but some new agents have recently been approved. The gorse seed weevil (*Apion ulicis)* is present in the county. This weevil retards plant spread by destroying seeds but does not kill established plants. With the increasing spread of gorse from the Bandon area and up the coast along Highway 101, there is an increasing risk that heavy equipment and recreational vehicles will vector gorse into the Watershed, in the absence of effective sanitation measures. Gorse seeds are long lived and sprout in response to sunlight, fire, or site disturbance.

Tansy ragwort (*Senecio jacobea*) had at one time reached epidemic proportions. The introduction of the cinnabar moth and flea beatles several years ago has brought tansy under control. Tansy is present in low numbers in the Watershed. Informal examination of tansy plants has found them all infected by one or

the other control agents. Tansy and the insect biological control agent populations currently fluctuate in cycles, with the populations of biological control agents building and dropping in response to the increases and decreases in the tansy population.

Reference Conditions

The profile of a reference condition for noxious weeds would be an area that is not only without noxious weeds, but is also free of all nonnative plants. This condition is most likely to currently exist in mid to late seral forests, away from the influence of roads.

Synthesis and Interpretation

The county roads in the western portion of the Watershed are major vectors of noxious weed invasion. Many activities, including road building, timber harvest, and agricultural practices, contribute to the invasion of noxious weeds in the Watershed. Ground disturbance predisposes forest land to invasion by quick-colonizing nonnative species. Seeds may be carried in by vehicles, logging equipment, or as contaminates in erosion control and forage seed mixtures, fill material and gravel. The increased light found along roadsides allow roads to serve as corridors for weed invasion. Once established along road right-of-ways, the seeds of many weed species can then disperse into nearby disturbed sites away from the roads.

In agricultural areas, weeds are often introduced in straw, hay, or seed mixtures. These weeds are spread by animal hooves, fur and other dispersal methods. Birds and other animals may also spread nonnative plants by ingestion, or by seed temporarily adhering to their bodies. Some noxious weeds, such as French broom and purple loosestrife, have aesthetic value to gardeners, and are introduced into an area by spreading from flower gardens.

Prevention of the introduction of noxious weed species (or detections and eradication before they spread from initial points of infestation) is the most time and cost-effective method of control. Noxious weeds need immediate treatment upon discovery to enable eradication. When populations become established, they can no longer be eradicated. If epidemic proportions are reached, then prevention of further spread from existing sites is the only feasible option.

Eradication/control can be accomplished through mechanical, biological, chemical suppression, and/or re-vegetation. Each of these methods of control can have potentially severe impacts to the environment. Therefore, knowing each weeds physiology is imperative for maximum benefit and minimum impacts. Currently, natural re-vegetation, mechanical, and chemical treatments, particularly when used in combination, are the best methods for eradication. While biological control has great appeal, the testing of new biological control agents is a slow expensive process that must done to insure the introduction of the candidate agent would not itself adversely affect the environment. Furthermore, biological control agents can help control but cannot eradicate a noxious weed species.

The noxious weeds known to occur in the Watershed are disturbance dependent early seral species. Canopy closure and light deprivation inside plantations will ultimately control these weeds species. An exception is Scotch broom, as its seed remains viable in the soil for about 80 years. Therefore, Scotch broom may be perpetuated on forest land where rotations are less than 80 years when plants are allowed to produce seed. Once broom is established, road construction and maintenance will likely provide the disturbances necessary for regeneration of noxious weed species.